REMARKS/ARGUMENTS

Favorable reconsideration of this application is respectfully requested.

Claims 1, 3-7, and 9-12 are pending in this application. Claims 2 and 8 are canceled by the present response. Claims 1-12 were rejected under 35 U.S.C. § 103(a) as unpatentable over "Universal Service-Providers for Database Private Information Retrieval" by Di-Crescenzo et al. (herein "Di-Crescenzo").

Initially, applicant and applicant's representative wish to thank Examiners Fleurantin and Alam for the interview granted applicant's representatives on January 27, 2004. During that interview the outstanding rejections were discussed in detail. Further, during that interview claim amendments were discussed to clarify claim features. The discussed claim amendments are submitted in the present response. During the interview applicant's representative also pointed out differences between the claims and the teachings in the applied art to Di-Crescenzo. The present response reiterates those discussed claim differences. The Examiners indicated they would further consider such claim amendments and differences when formally presented in a filed response.

Addressing the above-noted rejection, applicants respectfully submit the claims clearly distinguish over the teachings in Di-Crescenzo.

Each of the independent claims is amended by the present response to clarify features recited therein. Specifically, independent claim 1 is amended to now incorporate the limitations of previously pending dependent claim 2. Independent claim 7 is similarly amended to incorporate the limitations of previously pending dependent claim 8. Further independent claims 11 and 12 are amended to include similar features as from original dependent claims 2 and 8, respectively. Such features are believed to even further clarify the claims over the applied art.

More specifically, each of the amended independent claims now recites an operation in which it is determined whether the attributes of a changed document schema include an attribute ID that is common to a non-changed document schema, through a comparison between attribute identifiers of the changed document schema and the non-changed document schema. Then, the attributes of the non-changed document schema are replaced with the attributes of the changed document schema having the common attribute identifiers. Such a document schema changing operation is shown, as a non-limiting example, in Figure 6 in the present specification. With such an operation an operator can easily and speedily change document attributes of a non-changed document schema to those pertaining to the changed document schema, even in a situation that the changed document schema and the document attributes pertaining to the non-changed document schema coexist in a document space. Further, with such an operation when an attribute name is changed the changed document schema can be simply overwritten to the non-changed document schema and no other processing is needed.[1]

The above-noted features are believed to clearly distinguish over the applied art to Di-Crescenzo.

The basis for the outstanding rejection to previously pending claim 2 cites Di-Crescenzo at page 10, lines 19-21 and page 9, lines 23-25.[2]

In response to that position applicants note that such cited disclosure in Di-Crescenzo has no teachings or relevance whatsoever to the operation clarified in the above-noted independent claims. That is, at page 10, lines 19-21 and page 9, lines 23-25 Di-Crescenzo does not even address a situation in which changed and non-changed document schemas are considered.

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[1] See the Specification at page 19, line 23 to page 20, line 7.
[2] Office Action of November 19, 2003, the paragraphs bridging pages 3 and 4.

Moreover, applicants respectfully submit that Di-Crescenzo also differs from the claims on a more basic level in that Di-Crescenzo does not disclose the same type of document management system and operation as in the claims.

The claims are directed to a document management operation that uses a plurality of document schemas to manage a document retrieval request. The document schemas define a structure of document contents. Each document schema includes a plurality of attributes. A schema identifier is assigned to each of the plurality of document schemas by generating a global unique identifier value every time a schema name of a new document schema is input. An attribute identifier is assigned to each of the plurality of attributes within the plurality of document schemas by generating another global unique identifier value for each of the plurality of attributes. By assigning an attribute identifier to each of the plurality of attributes, it is easier and faster to find out which attribute has been changed when the document schema is changed.[3]

Applicants also note that Di-Crescenzo does not disclose any type of structure in which different document schemas each include plural attributes which each includes their own attribute IDs, see for example Figure 2 of the present specification as a non-limiting example.

In contrast to the claims as currently written Di-Crescenzo discloses a private information retrieval scheme in which a database shifts an original data string to a virtual data string to reduce the retrieval of the record in the original data string to the retrieval of the record in the virtual data string.[4] That shift in Di-Crescenzo merely constructs a virtual data string in a position different from a position of the original data string, and thus the original data string remains the same and is not assigned an identifier. Furthermore, performing such

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[3] See, e.g., Figure 2 and Specification at page 12, lines 2-4.
[4] Di-Crescenzo at page 10, lines 4-10.
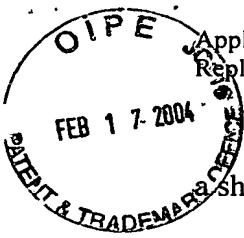
a shift increases the data size, thereby making the answer complexity unrealistically large in a

system including a large number of servers.[5]

In such ways, <u>Di-Crescenzo</u> does not even disclose a structure similar to that in the

claims as currently written in which a different attribute identifier is assigned "to each of the

plurality of attributes within the plurality of document schemas by generating another global

unique identifier for each of the plurality of attributes".

In such ways each of the claims is believed to distinguish over the applied art to <u>Di-</u>
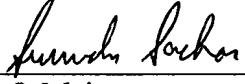
<u>Crescenzo</u>.

As no other issues are pending in this application, it is respectfully submitted that the

present application is now in condition for allowance, and it is hereby respectfully requested

this case be passed to issue.

Respectfully submitted,

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[5] <u>Di-Crescenzo</u> at page 10, lines 36-39.